

Color, ADMI Tristimulus Filter Method SM 18 <sup>th</sup> /20 <sup>th</sup> 2120 E						Page 1 of 2
Facility Name: _____ VELAP ID: _____						
Assessor Name: _____ Analyst Name: _____ Inspection Date: _____						
Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments	
Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____						
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____						
For color values less than 250 ADMI are cells with 5-cm light path used and for more than 250 ADMI are cells with a 1-cm light path used?	SM 2120E.2c					
Is a filtration system using gooch filtering crucible with pore size 40 to 60 $\mu$ m used, or is a centrifuge capable of achieving 1000 x g used for particle removal?	SM 2120E.2d, SM 2120C.2.b					
Are separate calibration curves generated for each cell path length?	SM 2120E.3a					
For 5-cm cell are 25, 50, 100, 200, and 250 standards prepared and appropriate standards for the 1-cm cell?	SM 2120E.3.a.1					
Is light transmittance determined for each standard and calculated per the method?	SM 2120E.3.a.2					
Are 100 mL sample portions (one at original pH and one at pH adjusted to 7.6) brought to room temperature? (Optionally, centrifugation may be used to replace this step if turbidity removal equivalent to filtration is achieved.)	SM 2120C3a SM 2120E3b					
Is 0.1 g filter aid mixed with 10mL centrifuged sample and filtered to waste to precoat filter system?	SM 2120C3a					
Is 40 mg filter aid mixed with 35 mL centrifuged sample and filtered, collecting 25 mL?	SM 2120C3a					
Are absorption cells cleaned with detergent and rinsed with DI water and rinsed twice with filtered sample?	SM 2120E3c					
Are external surfaces cleaned with lens paper?	SM 2120E3c					
Notes/ Comments:						

Color, ADMI Tristimulus Filter Method SM 18 <sup>th</sup> 2120 E						Page 2 of 2
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Are transmittance readings obtained for the sample with all three filters?	SM 2120E3c					
Is instrument standardized at 100% transmittance using DI water?	SM 2120E3c					
Are calculations performed per the method? For samples with tristimulus values X, Y, and Z, $X = (T_3 \times 0.1899) + (T_1 \times 0.791)$ $Y = (T_2)$ $Z = (T_3 \times 1.1835)$ where $T_1$ = transmittance from Filter 1, etc. Convert the tristimulus values to Munsell values using published tables 2,3,4 or by Bridgeman equation. Calculate the intermediate value (DE): $DE = \{(0.23 \Delta V_y)^2 + [\Delta(V_x - V_y)]^2 + [0.4 \Delta(V_y - V_z)]^2\}^{1/2}$ where $V_y = V_{ys} - V_{yc}$ $\Delta(V_x - V_y) = (V_{xs} - V_{ys}) - (V_{xc} - V_{yc})$ $\Delta(V_y - V_z) = (V_{ys} - V_{zs}) - (V_{yc} - V_{zc})$ Use the DE value to calculate the calibration factor F: $F_n = (APHA)_n(b) / (DE)_n$ Calculate the final ADMI value: $ADMI \text{ value} = (F)(DE) / b$ where b = absorption cell light path, cm	SM 2120E3d					
Are ADMI color values reported at pH 7.6 <b>AND</b> the original pH?	SM 2120E3c					
<b>NOTE:</b> The method includes a section referencing an alternate method, as an "extension" to this method: Allan, et al., Proceeding of 28 <sup>th</sup> Industrial Waste Conference, 1973.	SM 2120E4					
Notes/ Comments:						